



2008 Annual Drinking Water Report

City of Horseshoe Bay

Consumer Confidence Report



Phone: (830) 598-8741 E-mail: city@horseshoe-bay-tx.gov Web Page: horseshoe-bay-tx.gov

We are pleased to present a summary of the quality of the water provided to you during the past year. The Safe Drinking Water Act (SDWA) requires that cities issue an annual "Consumer Confidence" report to customers in addition to other notices that may be required by law. This report details where our water comes from, what it contains, and the risks our water testing and treatment are designed to prevent. The Texas Commission on Environmental Quality (TCEQ) has assessed your system and has determined the water is safe to drink. The analysis was made by using the data in the attached tables. Since your water meets federal and state water quality standards there may not be any health based benefits to purchasing bottled water or point of use devices. The City of Horseshoe Bay is committed to providing you with a safe and reliable water supply.

INFORMED CONSUMERS ARE OUR BEST ALLIES

in maintaining safe drinking water. We encourage public interest and participation in our community's decisions affecting drinking water. City Council Meetings are held monthly at the City offices. Contact the City office for dates of the City Council Meetings. The public is always welcome. More information is available on the World Wide Web at www.waterdata.com, or at the City's Web page at www.horseshoe-bay-tx.gov.

NOTICE FOR PERSONS WITH VULNERABILITY TO PARTICULAR MICROBIAL CONTAMINANTS

Some people may be more vulnerable to microbial contaminants, such as Cryptosporidium in drinking water than is the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline (800-426-4791).

WHERE DO WE GET OUR DRINKING WATER?

Our drinking water is obtained from surface water sources. It comes from LAKE LYNDON B. JOHNSON. TCEQ completed an assessment of our source water and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for our water system are based on this susceptibility and previous sample data. Any detection of these contaminants will be found in this report. If we receive or purchase water from another system, their susceptibility is not included in this assessment. For more information on source water assessments and protection efforts at our system, please contact us.

OUR DRINKING WATER IS REGULATED

by the Texas Commission on Environmental Quality (TCEQ) and they have determined that the City's water quality meets all of the requirements as stated in the Federal Drinking Water Standards.

WATER SOURCES:

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals, and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water before treatment include: microbes, inorganic contaminants, pesticides, herbicides, radioactive contaminants, and organic chemical contaminants.

SECONDARY CONSTITUENTS

Many constituents (such as calcium, sodium, or iron), which are often found in drinking water, can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not the EPA. These constituents are not causes for health concern. Therefore, secondary constituents are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

NEW CENTRAL WATER TREATMENT PLANT

Construction on the new Central Water Treatment plant began in November 2004. This project replaced the aging and out of date facility with a new cutting edge membrane treatment technology providing a higher level of water quality and dependability. The new facility has been supplying treated water since March 2006 with final completion of the facility accepted in November of 2006. The facility is designed to exceed current as well as future pending regulations. This facility will be expandable from four to eight million gallons per day by adding modular membrane units without the need for major construction expense.

Este informe incluye informacion importante sobre el agua potable. Si tiene preguntas o comentarios sobre este informe en espanol, favor de llamar al tel. (830) 598-8741 para hablar con una persona bilingue en espanol.

ABOUT THE FOLLOWING PAGES

The pages that follow list all of the federally regulated or monitored contaminants which have been found in your drinking water. The U.S. EPA requires water systems to test for up to 97 contaminants.

DEFINITIONS

Maximum Contaminant Level (MCL) The highest permissible level of a contaminant in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL) The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Treatment Technique (TT) A required process intended to reduce the level of a contaminant in drinking water.

Action Level (AL) The concentration of a contaminant which, if exceeded, triggers treatment or their requirements which a water system must follow.

ABBREVIATIONS

NTU - Nephelometric Turbidity Units (amount of particulates in water; a measure of clarity of water)

MFL - million fibers per liter (a measure of asbestos)

pCi/L - picocuries per liter (a measure of radioactivity)

ppm - parts per million, or milligrams per liter (mg/L)

ppb - parts per billion, or micrograms per liter (µg/L)

ppt - parts per trillion, or nanograms per liter

ppq - parts per quadrillion, or picograms per liter

TOTAL ORGANIC CARBON

Total organic carbon (TOC) no health effects. The disinfectant can combine with TOC to form disinfection byproducts. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. Byproducts of disinfection include trihalomethanes (TTHMs) and haloacetic acids (HAA5) which are reported elsewhere in this report.

Year	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
2008	Source Water	4.28	3.06	5.96	ppm	Naturally present in the environment
2008	Drinking Water	3.50	2.73	4.39	ppm	Naturally present in the environment

MAXIMUM DISINFECTION RESIDUALS

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Chemical
2008	Free Chlorine/Chloramine	1.74	0.5	3.9	4.0	<4.9	ppm	Disinfectant used to control microbes.

MICROBIAL TESTING: TOTAL COLIFORM NOT DETECTED FECAL COLIFORM NOT DETECTED

INORGANIC CONTAMINANTS

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2005	Barium	.0686	0.0668	0.0705	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
2005	Chromium	1.09	1.05	1.13	100	100	ppb	Discharge from steel and pulp mills, erosion of natural deposits.
2008	Fluoride	0.35	0.24	0.46	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2008	Nitrate	0.045	0.03	0.06	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
2008	Gross beta emitters (2005)	1.95	0	3.9	50	0	pCi/L	Decay of natural and man-made deposits.

ORGANIC CONTAMINANTS TESTING WAIVED NOT REPORTED, OR NONE DETECTED

DISINFECTION BYPRODUCTS

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2008	Total Haloacetic Acids	19.3	16.0	22.6	60	ppb	Byproduct of drinking water disinfection.
2008	Total Trihalomethanes	34.65	24.2	45.1	80	ppb	Byproduct of drinking water disinfection.

UNREGULATED CONTAMINANTS

Bromoform, chloroform, dichlorobromoethane, and dibromochloromethane are disinfection byproducts. There is no maximum level of contaminate for these chemicals from the entry point to distribution.

Year	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
2008	Chloroform	16.0	8.0	24.0	ppb	Byproduct of drinking water disinfection.
2008	Bromoform	1.25	.6	1.9	ppb	Byproduct of drinking water disinfection.
2008	Bromodichloromethane	12.4	6.8	18.0	ppb	Byproduct of drinking water disinfection.
2008	Dibromochloromethane	6.95	3.9	10.0	ppb	Byproduct of drinking water disinfection.

LEAD AND COPPER

Year	Contaminant	The 90th Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Source of Contaminant
2008 (2006)	Lead	3.3	0	15	ppb	Corrosion of household plumbing systems; erosion of natural deposits.
2008 (2006)	Copper	0.0989	0	1.3	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

TURBIDITY

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Year	Contaminant	Highest Single Measurement	Lowest % of Monthly Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Contaminant
2008	Turbidity	0.30	100.0	0.3	NTU	Soil runoff.

WATER SYSTEM USAGE DATA (CALENDER YEAR)

Water Produced: 705 million gallons	Water Produced (acre-feet) 1,833
Maximum Month: July (86.5 million gallons)	Minimum Month: March (35.0 million gallons)
Maximum Day: August 3rd (2.953 million gallons)	Average Day: (1.93 million gallons)
No. of Service Connections: 3,142 (Dec 2008)	Estimated Population Served: 6,504 (Dec 2008)
Percentage of Water going for Outside Use: 68%	Percentage of Water Entering Sewer: 32%

WATER CONSERVATION TIPS (additional tips available on City's website)

1. Check your toilet for leaks. Put dye tablets or food coloring into the tank. If color appears in the bowl without flushing, there's a leak that should be repaired.
2. Put a layer of mulch around trees and plants. Water during the cool parts of the day. Don't water the lawn on rainy days.
3. Conduct a landscape irrigation audit on your system. Water twice weekly. The goal is to provide 1" of water depth weekly. Ensure spray is not running off from targeted area. Install a smart controller to automatically reduce irrigation when not required. Contact the City for further information.

SECONDARY AND OTHER NOT REGULATED CONSTITUENTS

(No associated adverse health effects)

Year	Constituent	Average Level	Minimum Level	Maximum Level	Limit	Unit of Measure	Source of Constituent
2005	Aluminum	.033	.011	.055	.05	ppm	Abundant naturally occurring element.
2008	Bicarbonate	170	167	173	NA	ppm	Corrosion of carbonate rocks such as limestone.
2005	Calcium	44.0	43.6	44.4	NA	ppm	Abundant naturally occurring element.
2008	Chloride	36	35	36	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity
2005	Copper	0.009	0.01	0.017	NA	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
2008	Magnesium	16.6	16.1	17.1	NA	ppm	Abundant naturally occurring element.
2005	Nickel	.002	.002	.002	NA	ppm	Erosion of Natural Deposits.
2008	pH	7.7	7.0	8.1	NA	units	Measure of corrosivity of water.
2005	Sodium	20	20.0	20.7	NA	ppm	Erosion of natural deposits; byproduct of oil field activity.
2008	Sulfate	26.0	23	29	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2008	Total Alkalinity as CaCO ₃	139.5	137	142	NA	ppm	Naturally occurring soluble mineral salts.
2008	Total Dissolved Solids	274	253	295	1000	ppm	Total dissolved mineral constituents in water.
2005	Total Hardness as CaCO ₃	178	175	181	NA	ppm	Naturally occurring calcium.
2005	Zinc	.136	.008	.264	5	ppb	Moderately abundant naturally occurring element; used in the metal industry.